

West Lake Boudreaux Shoreline Protection/Marsh Creation (TE-CW-2)

Coast 2050 Strategy Coastwide: Maintenance of Gulf Bay and Lake Shoreline Integrity

Project Location - Region 3: Terrebonne Basin; Terrebonne Parish; West shore of Lake Boudreaux

Problem - The west bank of Lake Boudreaux has experienced high rates of erosion due to wind driven waves and high water. These erosion rates vary from 45 ft/yr (northwestern shore) to 7 ft/yr (southwestern shore). The shoreline is approximately 600 - 900 ft. in width and has been breached in several places. If this erosion is not stopped then the interior marsh will be compromised. The interior marsh had a land loss rate of 3.68% per year from 1983-1990. Continued shoreline loss will convert the productive shallow open-water areas filled with SAV to an open lake habitat.

Goals – 1) Reduce shoreline erosion to protect 80 acres of emergent marsh and protect submerged aquatic vegetation throughout the project area. 2) Initially create 124 acres of emergent marsh along the shoreline and interior marsh sites through deposition of dredged material. 3) Reduce marsh loss rates within the project area.

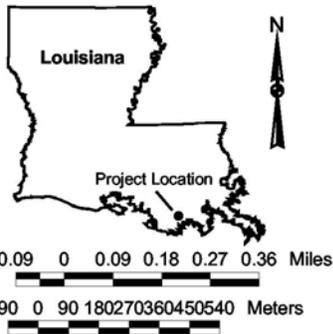
Proposed Solution – 1) Construct 11,644 linear feet of shoreline protection in two sections along the western shoreline of Lake Boudreaux. A gap, approximately 100 ft wide, would be left open for fish access. 2) Construct 4,000 linear feet of earthen dike and 4 earthen plugs to contain dredged material. Hydraulically dredge lake-bottom sediments to create 124 acres of marsh. 3) Construct earthen plugs to reduce water exchange. 4) Enlarge existing openings or create new openings in the pumping station canal spoil bank to facilitate water and organism exchange between the north and south ponds.

Project Benefits - The project will benefit a total of 1,177 acres of marsh and open water. It will create and/or protect a net of 145 acres of emergent marsh over the 20-year project life.

Project Cost – The total fully funded cost is \$14,565,900 and the fully funded first cost is \$13,022,000.

Risk/Uncertainty and Longevity/Sustainability - This project has low risk because the use of rocks for shoreline erosion projects has been shown to stop shoreline erosion and marsh creation is a successful tool. The project should continue providing benefits for more than 20 years after construction because low subsidence rate in Boudreaux Basin and amount of remaining marsh.

Sponsoring Agency and Contact Person - U.S. Fish and Wildlife Service
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- Project area
- Inside Dikes
- Shoreline Protection
- Fishways
- Earthen Plug
- Direct impact

Data Source:
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station
 LA Department of Natural Resources
 Coastal Restoration Division
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 1998 Digital Orthophoto Quarter Quadrangle (DOQQS)

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 Region 3

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